AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings includes changes to Figures 1a, 1b, and 2. These sheets replace the original Figures 1a, 1b, and 2.

Attachments: Replacement Sheets
Annotated Sheets Showing Changes

REMARKS

Applicants request reconsideration of the application as amended.

Status of the Claims

Claims 1-40 are pending in the application. Claims 8, 13, and 23-28 have been withdrawn from consideration after a restriction.

Drawings

Applicants have provided the attached Replacement Sheets and Annotated Sheets Showing Changes. Applicants submit that the corrected drawings are in compliance with 37 CFR 1.121(d).

Allowable Subject Matter

Claims 16-22 and 40 have been objected to "as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." (Office Action, page 11). Applicants wish to express appreciation to the Examiner for the indication of allowable subject matter.

Rejection of Claims 1-4, 6 and 11-12 under 35 U.S.C. § 102(b)

Claims 1-4, 6 and 11-12 were rejected under 35 U.S.C. § 102(b) "as being anticipated by GB 2 156 592 to Kewley." (Office Action, page 3). According to the Examiner, "Kewley discloses an electrically conductive elastic composite yarn comprising at least one elastic member (12) having a relaxed unit length L and a drafted length of (N x L), wherein N is in the range of about 1.0 to about 8.0 (see Figure 3), and at least one conductive covering filament (a filament of layer 18) surrounding the elastic member (see entire document including page 1, lines 15-22 and Figures 1-3)." (Office Action, page 3). The Examiner further acknowledged that "Kewley does not specifically

disclose that the at least one conductive covering filament has a length that is greater than a drafted length of the elastic member such that substantially all of the elongating stress imposed on the composite yarn is carried by the elastic member . . . ." (*Id.*) Applicants submit that Kewley fails to anticipate the claimed invention.

Applicants note, as a preliminary matter, that Kewley is primarily directed to electrically conductive components that can be incorporated into radio antennas. In contrast to Kewley, Claim 1 of the present application recites:

> An electrically conductive elastic composite yarn comprising: at least one elastic member having a relaxed unit length L and a drafted length of (N x L), wherein N is in the range of about 1.0 to about 8.0; and
>
> at least one conductive covering filament surrounding the elastic member, the conductive covering filament having a length that is greater that the drafted length of the elastic member,
>
> such that substantially all of an elongating stress imposed on the composite yarn is carried by the elastic member.

Applicants' composite yarn is intended primarily for textile use.

Applicants submit that Kewley fails to disclose all of the recitation of claim 1 for at least the reason that Kewley fails to disclose an electrically conductive elastic composite yarn comprising a conductive covering filament "having a length that is greater than the drafted length of the elastic member, such that substantially all of an elongating stress imposed on the composite yarn is carried by the elastic member." This recitation is not taught or suggested by Kewley.

Instead, as noted by the Examiner, Kewley merely discloses that conductive filaments may be braided with elastic material. Kewley does not teach a drafted length of the elastic member and does not teach a conductive covering filament having a length that is greater than the drafted length of the elastic member. Moreover, such disclosure fails to teach that substantially all of an elongating stress imposed on a composite yarn is carried by an elastic member. Accordingly, Kewely fails to expressly disclose Applicants' claimed invention.

Kewley also fails to inherently disclose Applicants' claimed invention. As stated in the MPEP, "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is ***necessarily present*** in the thing described in the reference,

and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by possibilities or probabilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.'" MPEP § 2112 (citing *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted) (emphasis added). Here, no showing has been made that Kewley teaches a composite yarn having a conductive covering filament that necessarily has a length that is greater than the drafted length of the elastic member, let alone such that substantially all of an elongating stress imposed on a composite yarn would necessarily be carried by an elastic member.[1] Thus, for at least these reasons, Kewley fails to inherently anticipate Applicants' claimed invention.

Rejection of Claims 1-7, 9-12, 14-15, and 39 Under 35 U.S.C. § 103(a) Over Kolmes '789 in View of Andrews

Claims 1-7, 9-12, 14-15 and 39 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,777,789 to Kolmes et al. ("Kolmes '789") in view of U.S. Patent No. 6,581,366 to Andrews ("Andrews"). According to the Examiner, "Kolmes '789 discloses that core fiber may be selected based upon the desired core properties (column 3, lines 52-58), but Kolmes '789 does not specifically mention the use of an elastic core member. Andrews discloses that it is known in the protective garment art to use an elastic core member because apparel can be fabricated with improved form-fitting properties and/or increased comfort (column 1, lines 18-19 and column 3, lines 8-22). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an elastic core member, as taught by Andrew, because the elastic core member allows for the fabrication of articles with improved form-fitting properties and/or increased comfort." (Office Action, page 5). For the reasons explained below, Applicants traverse this rejection.

[1] With specific regard to whether the construction disclosed in Kewley would inherently provide for a composite yarn having an elastic member to carry substantially all of an elongating stress, Applicants note that several parameters must be considered in order to determine whether a given material would provide such a characteristic (such as the mechanical characteristics of the elastic member, the relative alignment of the elastic member and the conductive covering filament, etc.). No showing has been made that the disclosure of Kewley even takes such parameters into consideration. Kewley simply was not looking to make an elastic composite yarn for textile applications.

Applicants note that Kolmes '789 is directed to protective (i.e., cut resistant) garments having a ***rigid*** core member. While providing for conductive covering filaments around a rigid core member may be relatively straightforward, Applicants claimed invention is directed to ***elastic*** composite yarns having at least one elastic member. In this regard, Applicants submit that providing for "an at least one conductive covering filament surrounding the elastic member" in order to obtain an "electrically conductive elastic composite yarn" presents several technical complexities that would not be expected to be present in composite material with a rigid core member. For example, in an electrically conductive elastic composite yarn one must consider relative component elongation, relative component relaxation, as well as the alignment and stability of the yarn during dynamic conditions of stretch and relaxing. In addition, the yarn must maintain its electrically conductive properties under such dynamic conditions and must be configured such that substantially all of an elongating stress imposed on the composite yarn is carried by the elastic member (as opposed to elongating stress being carried by the at least one conductive covering filament). Kolmes '789 fails to provide any teaching or suggestion that would allow a person having ordinary skill in the art to make such a yarn and such deficiency in Kolmes '789 is not remedied by the disclosure of Andrews.

Andrews relates to cut-resistant stretch yarns and contains no teaching or suggestion for incorporating a ***conductive*** covering filament into such yarns. In this regard, Applicants note that the particular covering materials disclosed in Andrews are selected for their cut-resistance or hardness and would not be expected by a person having skill in the art to have the same physical properties (with respect to tensile strength, hardness, etc.) as those expected for conductive materials. Applicants further note that methods for successful configuration of materials in a composite yarn depend, *inter alia*, on the physical properties of those materials. Therefore, specific methods taught in Andrews in order to configure his disclosed cut-resistant yarns do not teach a person of skill in the art to configure conductive yarns, especially conductive elastic composite yarns, wherein substantially all of an elongating stress imposed on the composite yarn must be carried by the elastic member (as opposed to elongating stress being carried by the at least one conductive covering filament). In short, as with

Kolmes' 789, Andrews fails to provide teachings that would allow for a person of skill in the art to make the claimed electrically conductive elastic composite yarn.

Rejection of Claims 1-7, 9-12, 14-15, and 39
Under 35 U.S.C. § 103(a) Over Andrews in View of Kolmes '137

Claims 1-7, 9-12, 14-15, and 39 were also rejected under 35 U.S.C. § 103(a) over Andrews in view of U.S. Patent No. 5,632,137 to Kolmes et al. ("Kolmes '137"). According to the Examiner, "Andrews discloses that the at least covering filament is to be formed of highly cut-resistant yarns (column 3, lines 23-26), but Andrews does not appear to specifically mention metallic wire. Kolmes '137 discloses that it is known in the protective garment art to wrap metallic wire around a core fiber to provide the core with cut-resistance (see entire document including column 2, lines 45-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the cut-resistant yarns from any suitable cut-resistant fiber material, such as metallic wire, as disclosed by Kolmes '137, because metallic wires provide cut-proof and/or cut resistance to the core fiber and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics." (Office Action, pages 8-9).

Applicants traverse this rejection for reasons similar to those discussed above regarding Kolmes '789 in view of Andrews. Specifically, Applicants note, as acknowledged by the Examiner, that Andrews relates to the use of highly cut-resistant yarns and, as discussed above, Andrews' teachings with regard to incorporating such cut-resistant yarns into a composite material fail to teach or suggest methods for making elastic composite yarns with ***conductive*** covering filaments. Such failure is not remedied by the disclosure of Kolmes '137, which, as with Kolmes '789, relates to cut-resistant composite yarns having a rigid core member. In short, as with Kolmes '789, Kolmes '137 fails to provide teachings that would allow a person of ordinary skill in the art to make an electrically conductive ***elastic*** composite yarn, let alone an electrically conductive elastic composite yarn in which substantially all of an elongating stress imposed on the composite yarn is carried by an elastic member.

Conclusion

In view of the foregoing, the rejections should be withdrawn and all pending claims should be allowed.

If prosecution may be further advanced, Examiner is invited to telephone the undersigned to discuss this application.

Enclosed is a petition for a two-month extension of time, along with an authorization to charge the fee to Deposit Account No. 22-0185 (Connolly Bove Lodge & Hutz LLP). If there are any additional fees due in connection with the filing of this Amendment, please charge the fees to Deposit Account No. 22-0185.

Date: 1 Feb 2006

By: _____

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Enclosure
Replacement Sheets (Drawings)
Annotated Sheet Showing Changes (Drawings)
Petition for Two-Month Extension of Time
Power of Attorney